

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for producing a catalyst composition comprising in a first step reacting ~~which is the reaction product of (a) and (b) wherein (a) is a product of mixing~~ (i) a compound containing at least one epoxy moiety with (ii) a compound containing an alcohol, amine, thiol or carboxylic acid moiety and an aldehyde or ketone moiety, or a product of an isocyanate with an alcohol having an aldehyde or ketone functionality, and reacting the product of the first step with ~~(b)~~ is a compound containing at least one primary amine and at least one tertiary amine moiety.

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Currently Amended) The ~~catalyst~~ method of Claim 1 wherein the compound having both primary and tertiary amine moieties is represented by the formula: $H_2N - R^8 - N(R^9)_2$ where R^8 is an aliphatic or cyclic chain having 1 to 20 carbon atoms and R^9 is a C1 to C3 alkyl group.

7. (Currently Amended) The ~~catalyst~~ method of Claim 1 wherein the compound having both primary and tertiary amine moieties is 3-(dimethylamino)-propylamine, 1-(3-aminopropyl)-imidazole, 1-(3-aminopropyl)-2-methylimidazole, N,N-dimethyldipropylenetriamine, N,N-dimethylethylene diamine, N,N-diethylethylene diamine, N,N-dibutylethylene diamine, 3-(diethylamino)-propylamine, 3-(dibutylamino)-propylamine, N,N,2,2-tetramethyl-1,3-propanediame, 2-amino-5-diethylaminopentane, N-methyl- (N'-aminoethyl)-piperazine, 1,4-bis(3-aminopropyl)piperazine, 3-aminoquinuclidine, 4-(2-aminoethyl)morpholine, 4-(3-aminopropyl)morpholine, N,N-dimethyl-1,4-phenylenediamine, 5-amino-1-ethylpyrazole, 2-aminopyridine, 2-(aminomethyl)pyridine, 2-(aminoethyl)pyridine, 4-aminopyridine, 3-aminopyridine, 3-(aminomethyl)pyridine, N-aminopropyl pyrrolidine 2-aminopicolines, diaminopyridines, 2-aminopyrimidine, 4-aminopyrimidine, aminopyrazine, 3-amino-1,2,4-triazine, aminoquinolines, N,N dimethyldipropylenetriamine and 3,3'-diamino-N-methyl dipropylamine, N-methyl-1,3-propyldiamine

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Currently Amended) The ~~catalyst~~ method of Claim 12 wherein the compound having an aldehyde moiety and an alcohol, amine, thiol or carboxylic acid ~~epoxide~~ ~~reactive~~ moiety is a C3 to C30 aliphatic, aromatic or polyaromatic compound or a ring structure containing a heteroatom, with the proviso when the compound having an aldehyde and alcohol, amine, thiol or carboxylic acid ~~epoxide~~ moiety contains a ring structure, the aldehyde moiety is bonded directly to the ring and the epoxide reactive moiety is bonded directly to the ring or bonded to the ring via a C3 to C6 linear or branched alkyl.

15. (Currently Amended) The ~~catalyst~~ method of Claim 1 wherein the compound having an alcohol, amine, thiol or carboxylic acid moiety and an aldehyde moiety is salicylaldehyde, vanillin, 5-(hydroxymethyl)-furfural, 3-hydroxybenzaldehyde, 4-hydroxybenzaldehyde, dihydroxybenzaldehydes, trihydroxybenzaldehydes, 2-carboxybenzaldehyde, 3-carboxybenzaldehyde or a mixture thereof.

16. (Currently Amended) The ~~catalyst~~ method of Claim 1 wherein the compound having an alcohol, amine, thiol or carboxylic acid moiety and a ketone moiety is a C3 to C30 aliphatic, aromatic or polyaromatic compound or a ring structure containing a heteroatom with the proviso when the compound having a ketone and epoxide moieties contains a ring structure, the epoxide reactive moiety is bonded directly to the ring or bonded via a C1 to C6 linear or branched alkyl.

17. (Currently Amended) The ~~catalyst~~ method of Claim 16 wherein the compound having an alcohol, amine, thiol or carboxylic acid moiety and a ketone moiety is 2'-hydroxyacetophenone, 4'-hydroxyacetophenone, 3'-hydroxyacetophenone, 3-acetyl-1-propanol, 4-hydroxy-3-methyl-2-butanone, 4-hydroxy-4-methyl-2-pentanone, 4'-hydroxyvalerophenone, dihydroxyacetophenone, benzyl-4-hydroxyphenylketone, acetovanillone, 3'-aminoacetophenone, 4'-aminoacetophenone, aminobenzophenone, 4-acetylbenzoic acid, 2-benzoylbenzoic acid or a mixture thereof.

18. (Currently Amended) The ~~catalyst~~ method of Claim 1 wherein the compound containing at least one epoxide moiety is represented by the formula:



wherein R^4 is substituted or unsubstituted aromatic, aliphatic, cycloaliphatic or heterocyclic group and n has an average value of from 1 to 8.

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Cancelled) The catalyst of Claim 1 wherein 1 to 50 percent of the epoxy moieties present in step (a) are reacted with a compound containing an epoxy reactive group and a tertiary amine moieties.

23. (Cancelled)

24. (Withdrawn) A polyol composition containing from 99.9 to 50 percent by weight of a polyol compound or blend of polyols having a functionality of 2 to 8 and a hydroxyl number of from 20 to 800 and from 0.1 to 50 percent of a catalyst composition wherein the catalyst has at least one imine linkage and at least one tertiary amine group.

25. (Withdrawn) The polyol composition of Claim 24 wherein the polyol or blend of polyols has an average hydroxyl number of from 20 to 100.

26. (Withdrawn) The polyol composition of Claim 25 wherein the catalyst composition is a catalyst of any one of Claim 1 to 23.

27. (Withdrawn) A process for the production of a polyurethane product by reaction of a mixture of

(a) at least one organic polyisocyanate with

(b) a polyol composition wherein the polyol has a calculated nominal functionality between 2 to 8 and a hydroxyl number of from 20 to 800 and

(c) at least one non-fugitive catalyst containing at least one imine linkage and at least one tertiary amine group

(d) optionally in the presence of another catalyst and/or blowing agent; and

(e) optionally additives or auxiliary agents known per se for the production of polyurethane foams, elastomers or coatings.

28. (Withdrawn) The process of Claim 27 wherein the catalyst is present in an amount from 0.1 to 50 weight percent of the total weight of (b) and (c).

29. (Withdrawn) The process of claim 27 wherein the catalyst is a catalyst of any one of Claims 1 to 23.

30. (Withdrawn) The process of Claim 29 for producing a flexible polyurethane foam wherein the polyol composition has a hydroxyl number from 20 to 100 and the blowing agent is water in an amount of 0.2 to 10 weight percent of the polyol.

31. (Withdrawn) A flexible polyurethane foam made by the process of Claim 30.

32. (Withdrawn) The process of Claim 29 for producing a rigid polyurethane foam where the polyol composition has an average hydroxyl number from 200 to 1000 and the blowing agent is water in combination with a hydrocarbon or a hydrofluorocarbon.

33. (Withdrawn) A rigid polyurethane foam made by the process of Claim 32.